desensitization signal source producing a pseudo-random noise sequence as said desensitization signal; and said coupler summing said pseudo-random noise sequence with said digitized I/Q signal to desensitize said receiver.

R E M A R K S

In response to the Final Office Action mailed January 9, 2004, independent claims 1 and 11 have been amended.

In the present Office Action, the Examiner has rejected "claims 1-17 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement." The Examiner states that the specification does not describe "adjusting the power level of the desensitization signal . . . so that the transmitted power of the mobile unit is sufficiently high at a handoff boundary to overcome potential interference. Applicants respectfully disagree, but to expedite matters, have amended claims independent 1 and 11. As amended, claims 1 and 11 requires adjusting the power level of the desensitization signal based on the bit error rate for the received signal level at the base station from mobile unit. This is clearly supported by the specification:

> In certain applications, control circuitry 29 can dynamically adjust the desensitization level depending upon a variety of parameters, including frame error rate (FER) and/or the bit error rate (BER) per received signal power level. In this context, dynamically adjust means that the control circuitry 29 can send a control signal to trigger an adjustment based on changing system operating parameters. The BER, FER and/or corresponding received signal level at base stations with overlapping coverage, nearby base stations and/or base stations in soft handoff with a mobile can be to examined to determine the desired desensitization level. For example, for a particular received power level, the system is designed to provide a particular FER, so the control circuitry 29 adjusts the adjustable attentuator 36 to provide the desired level of desensitization. The level of desensitization may be changed due a change in

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the operating environment; for example, a building may
be built next to the base station, a change in the
celluar configuration or change in capacity." 4:25-5:4.

That is, the bit error rate for the received signal level is
examined to determine the level of desensitization necessary. As
discussed in the background of invention, such desensitization is
needed for the mobile units to maintain a sufficiently high signal
power level to ensure a proper boundary handoff.

In view of the above, applicants believe independent claims
1 -17 to comply with the requirements of 35 U.S.C. §112.

Applicants' invention is directed to a method and system for
desensitizing the base station receiver. This is accomplished by
injecting a so-called "desensitization" signal onto the receive path
of the wireless receiver without attenuating the received signal
down towards the noise level. This desensitization signal can take
a variety of forms, such a broadband noise, a continuous eave
signal, a modulated signal or a digital pseudo-random noise
sequence. In many cellular communication systems, the power level
transmitted by mobile units is controlled by the serving base
station. This is done so that the mobile unit transmits the lowest
power level necessary to maintain a good quality link to the base
station. However, it may be desirable to reduce the sensitivity of
the wireless receiver at the base station so that the base station
believes that the mobile unit is farther away that it really is.
The level of desensitization can be adjusted based on the bit error
rate for the received power level. Desensitizing the base station
receiver results in the mobile unit maintaining a higher power
level than it normally would at a handoff boundary to overcome
potential interference.

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In the present Office Action, claims 1-3, 5, 7-12 and 14-16 have been rejected under 35 U.S.C. §103(a) as being unpatentable

FIG. 5
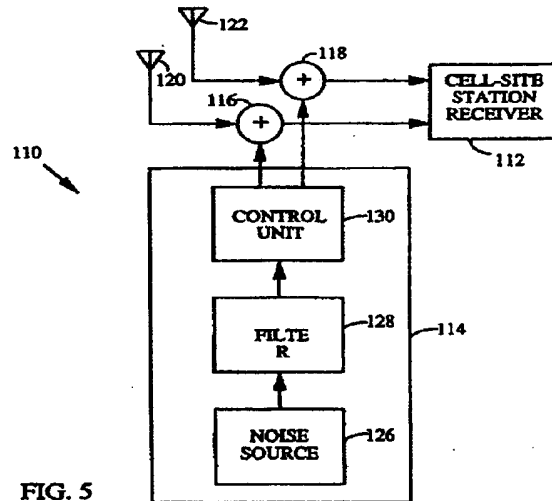
over Soliman in view of Weaver. Also, claims 4 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Soliman and Weaver, Jr., and further in view of Hall et al. Ostensibly, claims 6 and 17 are still allowable, as noted in the previous office action, if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.

In contrast to applicants' invention, Soliman discloses a method and apparatus for **simulating** the effect of signal interference by injecting white Gaussian noise in a cell-site station receiver. Referring to Fig. 5 of Soliman, reproduced herein above, a simplified block diagram of the receive section (110) of an exemplary cell-site station is shown. The receive section (110) includes a cell-site station receiver (112) as well as a interference simulation apparatus (114) designed to simulate

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the interference created by subscriber units in cells proximate the cell in which the cell-site under test is located. The interference signal produced by the simulation apparatus (114) is combined in summers (116) and (118) together with signals received from cell-site station antennas (120, 122), respectively. The simulation apparatus (114) includes a noise source (126) for generating interference noise of a predefined density. The noise signal is then passed to control unit (130) and adjusted by an adjustable attenuator to provide the desired amount of simulated interference.

On the other hand, Weaver, Jr. et al. discloses an apparatus and method for adding and removing a target base station from a network of base stations. The apparatus comprises two attenuators: one for setting an artificial receive noise power level and second for setting a transmit level.

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Referring to Fig.3 of Weaver, Jr., et al., reproduced herein above, a base station 200 may be added or removed from a network of existing base stations as follows. The base station 200 has a transmit path 202 and a receive path 204. In the receive path 204 is a first attenuator 210 that can be used to control a level of artificial noise receive power of the base station 200. The natural signal power (P_N) is the input to the first attenuator 210 which varies the level of the natural signal power from the mobile units which reaches LNA 224 and which varies the level of artificial noise receive power perceived by the receiver.

The output of (P_R) represents the attenuated signal power and noise receive amplified by LNA transmit path 202 attenuator 219, to vary the
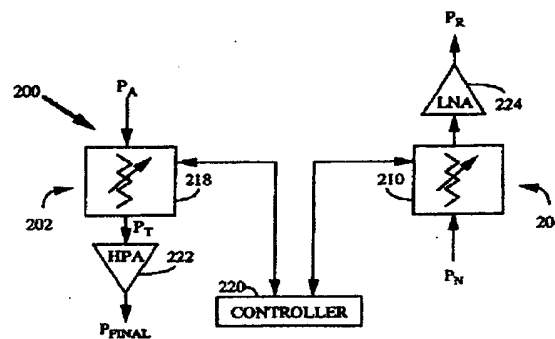

FIG. 3

LNA 223 the sum of natural artificial power as 224. In the is a second which is used transmit

power level of the base station 200. The attenuator level of both the first and second attenuators 210, 218 are controlled by a controller 220. The artificial noise level power sets the reverse link coverage area of the base station. When a base station is added, the transmit power is low and the artificial receive power signal is high. As loading increases, the artificial receive noise power is decreased and the transmit power is increased such that two coverage areas of the base station remain balanced.

Applicants' claimed invention requires adjusting the power level of the desensitization signal based on the bit error rate for the received power level at the base station. In contrast, Soliman

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simply teaches how to simulate the noise that would be present if a wireless communication were loaded to various capacities. During testing, the injected noise is set depending on the **simulated loading desired**. The injected noise is not adjusted based on the bit error rate for the received signal level, **but rather on what the user wants it to be during testing**. Applicants desensitize the receiver so as to raise the transmission power level of the received signal from the mobile unit. As such, this ensures that the mobile unit transmits a sufficiently high signal power level at a handoff boundary.

Again, Soliman merely attempts to simulate interference for testing purpose, and is not based on the bit error rate for the received signal level at the base station. Nowhere is remotely shown, taught or suggested that the desensitization signal should be adjusted based on the bit error rate for the received signal level. Weaver adjusts the noise power level solely when adding or removing a target base station depending on the load on the base station. Neither the bit error rate nor the received signal level is relevant for Weaver. This should not be surprising since the problem sought to be sought by Weaver is substantially different that the sough to be solved by applicant.

Hall et al. does not cure the deficiencies of the prior art. Hall et al. discloses an "Other User Noise Simulator (OUNS)." Again, in evaluating communication systems it is may be necessary to simulate the noise that would be present if the system were loaded to various capacities. Hall et al. discloses a receiver having an OUNS for effecting such a simulation. However, the noise level of noise is based on simulated load capacity, and based neither the bit error rate nor the received signal level at the base station.
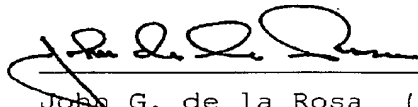
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Applicants respectfully submit that their claimed invention is nowhere remotely shown, suggested or taught in either Soliman, Weaver, or Hall et al. Neither references, individually or in combination, suggests applicant's claimed invention.

In view of the remarks above, applicants believe independent claims 1 and 11 to be allowable under 35 U.S.C. §103. Since independent claims 1 and 11 are allowable, it is believed that dependent claims 2-10 and 12-17 are also allowable.

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Since this application is believed to be in condition for allowance, reconsideration and allowance are respectfully solicited.

Respectfully Submitted,
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